10/615,659

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=> d his

     (FILE 'HOME' ENTERED AT 14:32:56 ON 06 OCT 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 14:33:23 ON 06 OCT 2005
L1          6829 S TESTIS(W)SPECIFIC
L2           428 S TYROSINE (W)LIGASE?
L3             3 S L1 AND L2
L4             2 DUP REM L3 (1 DUPLICATE REMOVED)
L5       7299296 S CLON? OR EXPRESS? OR RECOMBINANT
L6            89 S L2 AND L5
L7         20724 S "CPG ISLAND"
L8            12 S L6 AND L7
L9            10 DUP REM L8 (2 DUPLICATES REMOVED)
L10           41 DUP REM L6 (48 DUPLICATES REMOVED)
                 E FEDER J N/AU
L11          183 S E3
                 E WU S/AU
L12         3445 S E3
                 E NELSON T C/AU
L13          127 S E3
L14         3727 S L11 OR L12 OR L13
L15            1 S L2 AND L14

=>
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* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  JUL 20   Powerful new interactive analysis and visualization software,
                   STN AnaVist, now available
 NEWS  4  AUG 11   STN AnaVist workshops to be held in North America
 NEWS  5  AUG 30   CA/CAplus -Increased access to 19th century research documents
 NEWS  6  AUG 30   CASREACT - Enhanced with displayable reaction conditions
 NEWS  7  SEP 09   ACD predicted properties enhanced in REGISTRY/ZREGISTRY
 NEWS  8  OCT 03   MATHDI removed from STN
 NEWS  9  OCT 04   CA/CAplus-Canadian Intellectual Property Office (CIPO) added
                   to core patent offices

 NEWS EXPRESS  JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:32:56 ON 06 OCT 2005

=> file medline embase biosis biotechds scisearch hcaplus ntis lifesci
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   0.21       0.21

FILE 'MEDLINE' ENTERED AT 14:33:23 ON 06 OCT 2005

FILE 'EMBASE' ENTERED AT 14:33:23 ON 06 OCT 2005
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FILE 'BIOSIS' ENTERED AT 14:33:23 ON 06 OCT 2005
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FILE 'BIOTECHDS' ENTERED AT 14:33:23 ON 06 OCT 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE 'SCISEARCH' ENTERED AT 14:33:23 ON 06 OCT 2005
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FILE 'HCAPLUS' ENTERED AT 14:33:23 ON 06 OCT 2005
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'NTIS' ENTERED AT 14:33:23 ON 06 OCT 2005
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FILE 'LIFESCI' ENTERED AT 14:33:23 ON 06 OCT 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

=> s testis(w)specific
L1 6829 TESTIS(W) SPECIFIC

=> tyrosine (w)ligase?
TYROSINE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s tyrosine (w)ligase?
L2 428 TYROSINE (W) LIGASE?

=> s l1 and l2
L3 3 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 2 DUP REM L3 (1 DUPLICATE REMOVED)

=> d 1-2 ibib ab

L4 ANSWER 1 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
DUPLICATE 1
ACCESSION NUMBER: 2004-07314 BIOTECHDS
TITLE: New **testis-specific** tubulin **tyrosine-ligase**-like BGS-42 polypeptide, useful for preventing, treating or ameliorating a medical condition, e.g. aberrant cellular proliferation, reproductive disorders or testicular disorders; involving vector-mediated gene transfer, expression in host cell for use in gene therapy
AUTHOR: FEDER J N; WU S; NELSON T C
PATENT ASSIGNEE: BRISTOL-MYERS SQUIBB CO
PATENT INFO: WO 2004005487 15 Jan 2004
APPLICATION INFO: WO 2003-US21605 9 Jul 2003
PRIORITY INFO: US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-099381 [10]
AB DERWENT ABSTRACT:
NOVELTY - A **testis-specific** tubulin **tyrosine** **-ligase**-like polypeptide, designated BGS-42 polypeptide, is new.
DETAILED DESCRIPTION - A **testis-specific** tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having tyrosine tubulin ligase activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are

also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having tyrosine tubulin ligase activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of (I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a recombinant vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a recombinant host cell comprising the vector sequences, or expressing the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the expression of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard recombinant methods. Making an isolated polypeptide comprises culturing the recombinant host cell under conditions such that the polypeptide is expressed, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a human tyrosine tubulin ligase. Preferred Method: Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of expression of the BGS-42 polypeptide in a tyrosine tubulin ligase sample, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders,

testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia, Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. Clones containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene expression. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:722839 HCAPLUS
DOCUMENT NUMBER: 141:238811
TITLE: Protein and cDNA sequences of a novel human **testis-specific** tubulin **tyrosine ligase** like protein BGS-42, and diagnostic and therapeutic use
INVENTOR(S): Feder, John N.; Nelson, Thomas C.; Wu, Shujian; Krystek, Stanley R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 615,659.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004171131	A1	20040902	US 2003-635977		20030807
US 2004157234	A1	20040812	US 2003-615659		20030709
PRIORITY APPLN. INFO.:			US 2002-394725P	P	20020709
			US 2003-615659	A2	20030709

AB The present invention provides novel polynucleotides encoding BGS-42 polypeptides, fragments and homologues thereof Also provided are vectors, host cells, antibodies, and recombinant and synthetic methods for producing said polypeptides. The invention further relates to diagnostic and therapeutic methods for applying these novel BGS-42 polypeptides to the diagnosis, treatment, and/or prevention of various diseases and/or disorders related to these polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides of the present invention.

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     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 14:33:23 ON 06 OCT 2005
L1          6829 S TESTIS(W)SPECIFIC
L2           428 S TYROSINE (W)LIGASE?
L3             3 S L1 AND L2
L4             2 DUP REM L3 (1 DUPLICATE REMOVED)

=> s clon? or express? or recombinant
L5       7299296 CLON? OR EXPRESS? OR RECOMBINANT

=> s l2 and l5
L6            89 L2 AND L5

=> s "cpG island"
L7         20724 "CPG ISLAND"

=> s l6 and l7
L8            12 L6 AND L7

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9            10 DUP REM L8 (2 DUPLICATES REMOVED)

=> d 1-10 ibib ab

L9   ANSWER 1 OF 10  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2005:156228  HCAPLUS
                            Correction of: 2005:16967
DOCUMENT NUMBER:          142:192331
                            Correction of: 142:108390
TITLE:                    Quantitative RT-PCR method for the detection in blood
                          of microarray-identified rheumatoid arthritis-related
                          gene transcripts for diagnosing and monitoring disease
                          state
INVENTOR(S):              Liew, Choong-Chin
PATENT ASSIGNEE(S):       Chondrogene Limited, Can.
SOURCE:                   U.S. Pat. Appl. Publ., 81 pp., Cont.-in-part of U.S.
                          Ser. No. 802,875.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   47
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     US 2005003394         A1    20050106    US 2004-812782           20040330
     US 2004014059         A1    20040122    US 2002-268730           20021009
     US 2005191637         A1    20050901    US 2004-803737           20040318
     US 2005196762         A1    20050908    US 2004-803759           20040318
     US 2005196763         A1    20050908    US 2004-803857           20040318
     US 2005196764         A1    20050908    US 2004-803858           20040318
     US 2005208505         A1    20050922    US 2004-803648           20040318
     US 2004265869         A1    20041230    US 2004-812716           20040330
     US 2005003394         A1    20050106    US 2004-812782           20040330
     US 2005003394         A1    20050106    US 2004-812782           20040330
PRIORITY APPLN. INFO.:                       US 1999-115125P      P   19990106
                                             US 2000-477148       B1  20000104
                                             US 2002-268730       A2  20021009
                                             US 2003-601518       A2  20030620
                                             US 2004-802875       A2  20040312
                                             US 2004-812782       A   20040330
AB   The present invention is directed to detection and measurement of gene
     transcripts and their equivalent nucleic acid products in blood for diagnosing
     and monitoring diseases.  The present invention demonstrates that a simple
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drop of blood may be used to determine the quant. **expression** of various mRNAs that reflect the health/disease state of the subject through the use of quant. reverse transcription-polymerase chain reaction (QRT-PCR) anal. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring rheumatoid arthritis using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L9 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:497356 HCAPLUS
DOCUMENT NUMBER: 143:39118
TITLE: Gene **expression** profiling for diagnosis, prognosis, and therapy of osteoarthritis and other diseases using microarrays
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 157 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004037841	A1	20040226	US 2002-85783	20020228
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004248169	A1	20041209	US 2004-812737	20040330
WO 2004112589	A2	20041229	WO 2004-US20836	20040621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2001-271955P	P	20010228
US 2001-275017P	P	20010312
US 2001-305340P	P	20010713
US 2002-85783	A2	20020228
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-809675	A	20040325

AB The present invention relates to gene **expression** profiling for diagnosis, prognosis and therapy of osteoarthritis and other diseases using microarray methods. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used todetect differentially **expressed** gene transcripts in hypertension, obesity, allergy,

systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L9 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:325595 HCAPLUS
DOCUMENT NUMBER: 142:353388
TITLE: Gene **expression** profiles and biomarkers for the detection of Alzheimer's disease-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Ltd., Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005079514	A1	20050414	US 2004-812827	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Alzheimer's disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L9 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:160724 HCAPLUS
DOCUMENT NUMBER: 142:259424
TITLE: Gene **expression** profiles and biomarkers for the detection of asthma-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005042630	A1	20050224	US 2004-816357	20040401
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
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PRIORITY APPLN. INFO.: US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312
US 2004-816357 A 20040401

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular asthma, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of three records for this document necessitated by the large number of index entries required to fully index the docoment and publication system constraints.].

L9 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2005:156681 HCAPLUS
Correction of: 2005:60757
DOCUMENT NUMBER: 142:216629
Correction of: 142:132329
TITLE: Gene **expression** profiles and biomarkers for the detection of hyperlipidemia and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318

US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812777	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular hyperlipidemia, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L9 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:1997 HCAPLUS
DOCUMENT NUMBER: 142:111841
TITLE: Gene **expression** profiles and biomarkers for the detection of depression-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004265868	A1	20041230	US 2004-812702	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812702	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular mental depression, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis,

osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L9 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60760 HCAPLUS
Correction of: 2004:1036573
DOCUMENT NUMBER: 142:153477
Correction of: 142:16776
TITLE: Gene **expression** profiles and biomarkers for the detection of Chagas disease and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312
			US 2004-813097	A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Chagas disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L9 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60759 HCAPLUS
Correction of: 2004:1036572
DOCUMENT NUMBER: 142:111840
Correction of: 142:16824
TITLE: Gene **expression** profiles and biomarkers for the detection of lung disease-related and other

disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812764	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L9 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60754 HCAPLUS
Correction of: 2004:1036571
DOCUMENT NUMBER: 142:233342
Correction of: 142:16836
TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318

US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004241727	A1	20041202	US 2004-812731		20040330
US 2004241727	A1	20041202	US 2004-812731		20040330
US 2004265869	A1	20041230	US 2004-812716		20040330
US 2005208519	A1	20050922	US 2004-989191		20041115
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312
			US 2004-812731	A	20040330
			WO 2004-US20836	A2	20040621

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L9 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:60755 HCAPLUS
Correction of: 2004:1036570

DOCUMENT NUMBER: 142:154259
Correction of: 142:36938

TITLE: Analysis of genetic information contained in peripheral blood for diagnosis, prognosis and monitoring treatment of allergy, infection and genetic disease in human

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 47

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241726	A1	20041202	US 2004-812707		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004241726	A1	20041202	US 2004-812707		20040330
US 2004241726	A1	20041202	US 2004-812707		20040330
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312
			US 2004-812707	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular allergy, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2,

hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

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=> d his

     (FILE 'HOME' ENTERED AT 14:32:56 ON 06 OCT 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 14:33:23 ON 06 OCT 2005
L1          6829 S TESTIS(W)SPECIFIC
L2           428 S TYROSINE (W)LIGASE?
L3             3 S L1 AND L2
L4             2 DUP REM L3 (1 DUPLICATE REMOVED)
L5       7299296 S CLON? OR EXPRESS? OR RECOMBINANT
L6            89 S L2 AND L5
L7         20724 S "CPG ISLAND"
L8            12 S L6 AND L7
L9            10 DUP REM L8 (2 DUPLICATES REMOVED)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L10           41 DUP REM L6 (48 DUPLICATES REMOVED)

=> d 1-41 ibib ab

L10  ANSWER 1 OF 41  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2005:156228  HCAPLUS
                            Correction of: 2005:16967
DOCUMENT NUMBER:          142:192331
                            Correction of: 142:108390
TITLE:                    Quantitative RT-PCR method for the detection in blood
                          of microarray-identified rheumatoid arthritis-related
                          gene transcripts for diagnosing and monitoring disease
                          state
INVENTOR(S):              Liew, Choong-Chin
PATENT ASSIGNEE(S):       Chondrogene Limited, Can.
SOURCE:                   U.S. Pat. Appl. Publ., 81 pp., Cont.-in-part of U.S.
                          Ser. No. 802,875.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   47
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
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     US 2005003394         A1    20050106    US 2004-812782           20040330
     US 2004014059         A1    20040122    US 2002-268730           20021009
     US 2005191637         A1    20050901    US 2004-803737           20040318
     US 2005196762         A1    20050908    US 2004-803759           20040318
     US 2005196763         A1    20050908    US 2004-803857           20040318
     US 2005196764         A1    20050908    US 2004-803858           20040318
     US 2005208505         A1    20050922    US 2004-803648           20040318
     US 2004265869         A1    20041230    US 2004-812716           20040330
     US 2005003394         A1    20050106    US 2004-812782           20040330
     US 2005003394         A1    20050106    US 2004-812782           20040330
PRIORITY APPLN. INFO.:                       US 1999-115125P     P    19990106
                                             US 2000-477148      B1   20000104
                                             US 2002-268730      A2   20021009
                                             US 2003-601518      A2   20030620
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US 2004-802875 A2 20040312
US 2004-812782 A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood for diagnosing and monitoring diseases. The present invention demonstrates that a simple drop of blood may be used to determine the quant. **expression** of various mRNAs that reflect the health/disease state of the subject through the use of quant. reverse transcription-polymerase chain reaction (QRT-PCR) anal. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring rheumatoid arthritis using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L10 ANSWER 2 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:984082 HCAPLUS
TITLE: Human glucocorticoid receptor coactivator STAMP modulating glucocorticoid-responsive gene **expression**, its orangutan and green monkey homolog, and therapeutic use thereof
INVENTOR(S): Simons, S. Stoney, Jr.; He, Yuanzheng
PATENT ASSIGNEE(S): Government of the United States of America as Represented by the Secretary of the Department of Health and Human Services, USA
SOURCE: PCT Int. Appl., 235 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005082935	A1	20050909	WO 2005-US6393	20050225

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-548039P P 20040226

AB The invention provides a new glucocorticoid receptor (GR) coactivator named STAMP (SRC-1 and TIF2 Associated Modulatory Protein) that can modulate transcription of glucocorticoid-responsive genes. The isolated STAMP gene is located on chromosome 14q24.3 and contains 32 introns, and its encodes a 1277 amino acid protein (predominant form, with predicted mol. weight of 143 kDa) or a 1281 amino acid protein with four extra amino acid at N-terminus. Activity of STAMP in GR-mediated induction. STAMP and TIF2 act cooperatively to modulate glucocorticoid receptor activity and STAMP activity requires the RID (receptor interaction domain) domains (around residues 834-1277) that mediate TIF2 binding to GR and/or STAMP. Also provided are siRNAs shown to inhibit STAMP actions. The invention also provides antibodies that can bind STAMP and modulate its activity. In addition, the invention provides antisense, ribozyme and siRNA STAMP nucleic acids that can modulate the **expression** of STAMP. Also provided are compns. and methods for modulating glucocorticoid-responsive gene **expression** and for treating a variety of diseases and conditions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:497356 HCAPLUS

DOCUMENT NUMBER: 143:39118
TITLE: Gene **expression** profiling for diagnosis, prognosis, and therapy of osteoarthritis and other diseases using microarrays
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 157 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004037841	A1	20040226	US 2002-85783	20020228
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004248169	A1	20041209	US 2004-812737	20040330
WO 2004112589	A2	20041229	WO 2004-US20836	20040621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2001-271955P	P	20010228
US 2001-275017P	P	20010312
US 2001-305340P	P	20010713
US 2002-85783	A2	20020228
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-809675	A	20040325

AB The present invention relates to gene **expression** profiling for diagnosis, prognosis and therapy of osteoarthritis and other diseases using microarray methods. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used todetect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L10 ANSWER 4 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:325595 HCAPLUS
DOCUMENT NUMBER: 142:353388
TITLE: Gene **expression** profiles and biomarkers for the detection of Alzheimer's disease-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Ltd., Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005079514	A1	20050414	US 2004-812827	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:
US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Alzheimer's disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L10 ANSWER 5 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:160724 HCAPLUS
DOCUMENT NUMBER: 142:259424
TITLE: Gene **expression** profiles and biomarkers for the detection of asthma-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005042630	A1	20050224	US 2004-816357	20040401
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318

US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
US 2005042630	A1	20050224	US 2004-816357	20040401
US 2005042630	A1	20050224	US 2004-816357	20040401

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-816357	A	20040401

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular asthma, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of three records for this document necessitated by the large number of index entries required to fully index the docoment and publication system constraints.].

L10 ANSWER 6 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:499078 HCAPLUS
DOCUMENT NUMBER: 143:23514
TITLE: A vital role of tubulin-**tyrosine-ligase** for neuronal organization
AUTHOR(S): Erck, Christian; Peris, Leticia; Andrieux, Annie; Meissirel, Claire; Gruber, Achim D.; Vernet, Muriel; Schweitzer, Annie; Saoudi, Yasmina; Pointu, Herve; Bosc, Christophe; Salin, Paul A.; Job, Didier; Wehland, Juergen
CORPORATE SOURCE: Department of Cell Biology, German Research Center for Biotechnology, Braunschweig, D-38124, Germany
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2005), 102(22), 7853-7858
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Tubulin is subject to a special cycle of detyrosination/tyrosination in which the C-terminal tyrosine of α-tubulin is cyclically removed by a carboxypeptidase and readded by a tubulin-**tyrosine-ligase** (TTL). This tyrosination cycle is conserved in evolution, yet its physiol. importance is unknown. Here, we find that TTL suppression in mice causes perinatal death. A minor pool of tyrosinated (Tyr-)tubulin persists in TTL null tissues, being present mainly in dividing TTL null cells where it originates from tubulin synthesis, but it is lacking in postmitotic TTL null cells such as neurons, which is apparently deleterious because early death in TTL null mice is, at least in part, accounted for by a disorganization of neuronal networks, including a disruption of the cortico-thalamic loop. Correlatively, cultured TTL null neurons display morphogenetic anomalies including an accelerated and erratic time course of neurite outgrowth and a premature axonal differentiation. These anomalies may involve a mislocalization of CLIP170, which we find lacking in neurite extensions and growth cones of TTL null neurons. Our results demonstrate a vital role of TTL for neuronal organization and suggest a requirement of Tyr-tubulin for proper control of neurite extensions.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:276126 SCISEARCH
THE GENUINE ARTICLE: 902DT
TITLE: Global effects of BCR/ABL and TEL/PDGFR beta **expression** on the proteome and phosphoproteome - Identification of the rho pathway as a target of BCR/ABL
AUTHOR: Unwin R D; Sternberg D W; Lu Y N; Pierce A; Gilliland D G; Whetton A D (Reprint)
CORPORATE SOURCE: Univ Manchester, Christie Hosp, Fac Med & Human Sci, Manchester M20 9BX, Lancs, England (Reprint); Univ Manchester, Fac Med & Human Sci, Manchester M20 9BX, Lancs, England; Christie Hosp, Paterson Inst Canc Res, Inst Mass Spectrometry, Manchester M20 9BX, Lancs, England; Harvard Univ, Sch Med, Brigham & Womens Hosp, Div Hematol, Boston, MA 02115 USA; Mt Sinai Sch Med, New York, NY 10029 USA; Howard Hughes Med Inst, Chevy Chase, MD 20815 USA
awhetton@picr.man.ac.uk
COUNTRY OF AUTHOR: England; USA
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (25 FEB 2005) Vol. 280, No. 8, pp. 6316-6326.
ISSN: 0021-9258.
PUBLISHER: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 80
ENTRY DATE: Entered STN: 18 Mar 2005
Last Updated on STN: 18 Mar 2005
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Many leukemic oncogenes form as a consequence of gene fusions or mutation that result in the activation or overexpression of a tyrosine kinase. To identify commonalities and differences in the action of two such kinases, breakpoint cluster region (BCR)/ABL and TEL/PDGFRbeta, two-dimensional gel electrophoresis was employed to characterize their effects on the proteome. While both oncogenes affected **expression** of specific proteins, few common effects were observed. A number of proteins whose **expression** is altered by BCR/ABL, including gelsolin and stathmin, are related to cytoskeletal function whereas no such changes were seen in TEL/PDGFRbeta-transfected cells. Treatment of cells with the kinase inhibitor STI571 for 4-h reversed changes in **expression** of some of these cytoskeletal proteins. Correspondingly, BCR/ABL-transfected cells were less responsive to chemotactic and chemokinetic stimuli than non-transfected cells and TEI/PDGFRbeta-transfected Ba/F3 cells. Decreased motile response was reversed by a 16-h treatment with ST1571. A phosphoprotein-specific gel stain was used to identify TEL/PDGFRbeta and BCR/ABL-mediated changes in the phosphoproteome. These included changes on Crkl, Ras-GAP-binding protein 1, and for BCR/ABL, cytoskeletal proteins such as tubulin, and Nedd5. Decreased phosphorylation of Rho-GTPase dissociation inhibitor (Rho GDI) was also observed in BCR/ABL-transfected cells. This results in the activation of the Rho pathway, and treatment of cells with Y27632, an inhibitor of Rho kinase, inhibited DNA synthesis in BCR/ABL-transfected Ba/F3 cells but not TEL/PDGFRB-**expressing** cells. **Expression** of a dominant-negative RhoA inhibited both DNA synthesis and transwell migration, demonstrating the significance of this pathway in BCR/ABL-mediated transformation.

L10 ANSWER 8 OF 41 MEDLINE on STN
ACCESSION NUMBER: 2005313865 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15890843
TITLE: Tubulin polyglutamylase enzymes are members of the TTL domain protein family.
AUTHOR: Janke Carsten; Rogowski Krzysztof; Wloga Dorota; Regnard Catherine; Kajava Andrey V; Strub Jean-Marc; Temurak Nevzat; van Dijk Juliette; Boucher Dominique; van Dorsselaer Alain; Suryavanshi Swati; Gaertig Jacek; Edde

Bernard
CORPORATE SOURCE: Centre de Recherches de Biochimie Macromoleculaire, CNRS, 34293 Montpellier, France.
SOURCE: Science, (2005 Jun 17) 308 (5729) 1758-62. Electronic Publication: 2005-05-12.
Journal code: 0404511. ISSN: 1095-9203.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 20050618
Last Updated on STN: 20050701
Entered Medline: 20050630

AB Polyglutamylation of tubulin has been implicated in several functions of microtubules, but the identification of the responsible enzyme(s) has been challenging. We found that the neuronal tubulin polyglutamylase is a protein complex containing a tubulin **tyrosine ligase** -like (TTLL) protein, TTLL1. TTLL1 is a member of a large family of proteins with a TTL homology domain, whose members could catalyze ligations of diverse amino acids to tubulins or other substrates. In the model protist Tetrahymena thermophila, two conserved types of polyglutamylases were characterized that differ in substrate preference and subcellular localization.

L10 ANSWER 9 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:412589 SCISEARCH
THE GENUINE ARTICLE: 914YX
TITLE: 3-Nitrotyrosine attenuates respiratory syncytial virus infection in human bronchial epithelial cell line
AUTHOR: Huang Y C T (Reprint); Li Z W; Brighton L E; Carson J L; Becker S; Soukup J M
CORPORATE SOURCE: CB 7315, 104 Mason Farm Rd, Chapel Hill, NC 27599 USA (Reprint); US EPA, Natl Hlth & Environm Effects Res Lab, Off Res & Dev, Res Triangle Pk, NC 27711 USA; Univ N Carolina, Ctr Environm Med Asthma & Lung Biol, Chapel Hill, NC USA
huang.tony@epa.gov
COUNTRY OF AUTHOR: USA
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY, (MAY 2005) Vol. 288, No. 5, pp. L988-L996. ISSN: 1040-0605.
PUBLISHER: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 55
ENTRY DATE: Entered STN: 28 Apr 2005
Last Updated on STN: 28 Apr 2005
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB 3-Nitrotyrosine (NO2Tyr), an L-tyrosine derivative during nitrative stress, can substitute the COOH-terminal tyrosine of alpha-tubulin, posttranslationally altering microtubular functions. Because infection of the cells by respiratory syncytial virus (RSV) may require intact microtubules, we tested the hypothesis that NO2Tyr would inhibit RSV infection and intracellular signaling via nitrotyrosination of alpha-tubulin. A human bronchial epithelial cell line (BEAS-2B) was incubated with RSV with or without NO2Tyr. The release of chemokines and viral particles and activation of interferon regulatory factor-3 (IRF-3) were measured. Incubation with NO2Tyr increased nitrotyrosinated alpha-tubulin, and NO2Tyr colocalized with microtubules. RSV-infected cells released viral particles, RANTES, and IL-8 in a time- and dose-dependent manner, and intracellular RSV proteins coprecipitated with alpha-tubulin. NO2Tyr attenuated the RSV- induced release of RANTES, IL-8, and viral particles by 50-90% and decreased alpha-tubulin-associated RSV proteins. 3-Chlorotyrosine, another L-tyrosine derivative, had no effects. NO2Tyr also inhibited the RSV- induced shift of the unphosphorylated form I of IRF-3 to the phosphorylated form II.

Pre-exposure of the cells to NO2 (0.15 ppm, 4 h), which produced diffuse protein tyrosine nitration, did not affect RSV- induced release of RANTES, IL-8, or viral particles. NO2Tyr did not affect the potential of viral spreading to the neighboring cells since the RSV titers were not decreased when the uninfected cells were cocultured with the preinfected cells in NO2Tyr-containing medium. These results indicate that NO2Tyr, by replacing the COOH-terminal tyrosine of alpha-tubulin, attenuated RSV infection, and the inhibition appeared to occur at the early stages of RSV infection.

L10 ANSWER 10 OF 41 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2004637325 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15580622
TITLE: Differential **expression** of tyrosinated tubulin in Spisula solidissima polar bodies.
AUTHOR: Alliegro Mark C; Alliegro Mary Anne
CORPORATE SOURCE: Marine Biological Laboratory, Woods Hole, Massachusetts, and Department of Cell Biology, Louisiana State University Health Sciences Center, New Orleans, Louisiana 70112, USA.. mallie@lshuhsc.edu
SOURCE: Developmental dynamics : an official publication of the American Association of Anatomists, (2005 Jan) 232 (1) 216-20.
Journal code: 9201927. ISSN: 1058-8388.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 20041223
Last Updated on STN: 20050622
Entered Medline: 20050621
AB The C-terminus of alpha-tubulin can be reversibly modified by a specific **tyrosine ligase** to yield an isoform known as Tyr-tubulin. Tyr-tubulin is typically found in more dynamic microtubule arrays such as the mitotic spindle, as opposed to stable structures like centrioles and flagella. In developing systems, it is **expressed** in relatively undifferentiated, proliferative cell types but is replaced by detyrosinated (Glu-) tubulin during differentiation. We found Tyr-tubulin highly enriched in a single polar body of Spisula solidissima embryos. Quantitation of DNA content by Hoechst staining indicates that polar body 1 (with twice the DNA content of polar body 2) is the Tyr-tubulin-positive cell. Other than the apoptosis marker caspase, this is, to our knowledge, the first distinguishing marker antigen for polar bodies, particularly for one polar body vs. another. This localization of Tyr-tubulin is unlikely to be a byproduct of the meiotic process itself, because it arises after ejection of both polar bodies is complete. Although polar bodies are typically thought of as a terminally differentiated vestige of meiosis, the localization of this more dynamic tubulin isoform suggests an active role in early development.

L10 ANSWER 11 OF 41 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN DUPLICATE 3
ACCESSION NUMBER: 2004-07314 BIOTECHDS
TITLE: New testis-specific tubulin **tyrosine-ligase** -like BGS-42 polypeptide, useful for preventing, treating or ameliorating a medical condition, e.g. aberrant cellular proliferation, reproductive disorders or testicular disorders ; involving vector-mediated gene transfer, **expression** in host cell for use in gene therapy
AUTHOR: FEDER J N; WU S; NELSON T C
PATENT ASSIGNEE: BRISTOL-MYERS SQUIBB CO
PATENT INFO: WO 2004005487 15 Jan 2004
APPLICATION INFO: WO 2003-US21605 9 Jul 2003
PRIORITY INFO: US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-099381 [10]

AB DERWENT ABSTRACT:
NOVELTY - A testis-specific tubulin **tyrosine-ligase** -like polypeptide, designated BGS-42 polypeptide, is new.

DETAILED DESCRIPTION - A testis-specific tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having tyrosine tubulin ligase activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having tyrosine tubulin ligase activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of (I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a **recombinant** vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a **recombinant** host cell comprising the vector sequences, or **expressing** the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the **expression** of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard **recombinant** methods. Making an isolated polypeptide comprises culturing the **recombinant** host cell under conditions such that the polypeptide is **expressed**, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a human tyrosine tubulin ligase. Preferred Method: Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of **expression** of the BGS-42 polypeptide in a tyrosine tubulin ligase sample, and diagnosing a pathological

condition or a susceptibility to a pathological condition based on the presence or amount of **expression** of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders, testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia, Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. **Clones** containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene **expression**. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

L10 ANSWER 12 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2005:156681 HCAPLUS
Correction of: 2005:60757

DOCUMENT NUMBER: 142:216629
Correction of: 142:132329

TITLE: Gene **expression** profiles and biomarkers for the detection of hyperlipidemia and other disease-related gene transcripts in blood

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 47

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812777	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular hyperlipidemia, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L10 ANSWER 13 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:824055 HCAPLUS
DOCUMENT NUMBER: 141:330185
TITLE: Gene **expression** profiling for diagnosis and treatment of angiogenesis-related disorders
INVENTOR(S): Gonda, Thomas John; Kremmidiotis, Gabriel
PATENT ASSIGNEE(S): Bionomics Limited, Australia
SOURCE: PCT Int. Appl., 148 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085675	A1	20041007	WO 2004-AU383	20040326

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: AU 2003-901511 A 20030328

AB The present invention provides methods of gene **expression** profiling for diagnosis and treatment of angiogenesis-related disorders. Diseases of the invention include cancer, rhematoid arthritis, diabetic retinopathy, psoriasis, cardiovascular diseases such as atherosclerosis, ischmeic limb disease and coronary heart disease.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 14 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:1997 HCAPLUS
DOCUMENT NUMBER: 142:111841
TITLE: Gene **expression** profiles and biomarkers for the detection of depression-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004265868	A1	20041230	US 2004-812702	20040330

PRIORITY APPLN. INFO.: US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312
US 2004-812702 A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular mental depression, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L10 ANSWER 15 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60760 HCAPLUS
Correction of: 2004:1036573
DOCUMENT NUMBER: 142:153477
Correction of: 142:16776
TITLE: Gene **expression** profiles and biomarkers for the detection of Chagas disease and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-813097	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Chagas disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L10 ANSWER 16 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:60759 HCAPLUS
Correction of: 2004:1036572

DOCUMENT NUMBER: 142:111840
Correction of: 142:16824

TITLE: Gene **expression** profiles and biomarkers for the detection of lung disease-related and other disease-related gene transcripts in blood

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 47

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004241728	A1	20041202	US 2004-812764	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009

US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812764	A	20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L10 ANSWER 17 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60754 HCAPLUS
Correction of: 2004:1036571
DOCUMENT NUMBER: 142:233342
Correction of: 142:16836
TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004241727	A1	20041202	US 2004-812731	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330
US 2005208519	A1	20050922	US 2004-989191	20041115

PRIORITY APPLN. INFO.:	US 1999-115125P	P	19990106
	US 2000-477148	B1	20000104
	US 2002-268730	A2	20021009
	US 2003-601518	A2	20030620
	US 2004-802875	A2	20040312
	US 2004-812731	A	20040330
	WO 2004-US20836	A2	20040621

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L10 ANSWER 18 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:60755 HCAPLUS

Correction of: 2004:1036570
DOCUMENT NUMBER: 142:154259
Correction of: 142:36938
TITLE: Analysis of genetic information contained in peripheral blood for diagnosis, prognosis and monitoring treatment of allergy, infection and genetic disease in human
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 47
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241726	A1	20041202	US 2004-812707	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004241726	A1	20041202	US 2004-812707	20040330
US 2004241726	A1	20041202	US 2004-812707	20040330
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.: US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312
US 2004-812707 A 20040330

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular allergy, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L10 ANSWER 19 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:722839 HCAPLUS
DOCUMENT NUMBER: 141:238811
TITLE: Protein and cDNA sequences of a novel human testis-specific tubulin **tyrosine ligase** like protein BGS-42, and diagnostic and therapeutic use
INVENTOR(S): Feder, John N.; Nelson, Thomas C.; Wu, Shujian; Krystek, Stanley R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 615,659.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004171131	A1	20040902	US 2003-635977		20030807
US 2004157234	A1	20040812	US 2003-615659		20030709
PRIORITY APPLN. INFO.:			US 2002-394725P	P	20020709
			US 2003-615659	A2	20030709

AB The present invention provides novel polynucleotides encoding BGS-42 polypeptides, fragments and homologues thereof Also provided are vectors, host cells, antibodies, and **recombinant** and synthetic methods for producing said polypeptides. The invention further relates to diagnostic and therapeutic methods for applying these novel BGS-42 polypeptides to the diagnosis, treatment, and/or prevention of various diseases and/or disorders related to these polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides of the present invention.

L10 ANSWER 20 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:405282 SCISEARCH
THE GENUINE ARTICLE: 812TJ
TITLE: Suppression of nuclear oscillations in Saccharomyces cerevisiae **expressing** Glu tubulin
AUTHOR: Badin-Larcon A C; Boscheron C (Reprint); Soleilhac J M; Piel M; Mann C; Denarier E; Fourest-Lieuvin A; Lafanechere L; Bornens M; Job D
CORPORATE SOURCE: CEA Grenoble, DRDC, Lab Cytosquelette, INSERM, U366, 17 Rue Martyrs, F-38054 Grenoble, France (Reprint); CEA Grenoble, DRDC, Lab Cytosquelette, INSERM, U366, F-38054 Grenoble, France; Inst Curie, Sect Rech, CNRS, UMR 144, F-75248 Paris 05, France; CEA Saclay, Serv Biochim & Genet Mol, F-91191 Gif Sur Yvette, France
COUNTRY OF AUTHOR: France
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (13 APR 2004) Vol. 101, No. 15, pp. 5577-5582.
ISSN: 0027-8424.
PUBLISHER: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 37
ENTRY DATE: Entered STN: 14 May 2004
Last Updated on STN: 14 May 2004
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB In most eukaryotic cells, the C-terminal amino acid of alpha-tubulin is aromatic (Tyr in mammals and Phe in Saccharomyces cerevisiae) and is preceded by two glutamate residues. In mammals, the C-terminal Tyr of alpha-tubulin is subject to cyclic removal from the peptide chain by a carboxypeptidase and readdition to the chain by a tubulin-Tyr ligase. There is evidence that tubulin-Tyr ligase suppression and the resulting accumulation of detyrosinated (Glu) tubulin favor tumor growth, both in animal models and in human cancers. However, the molecular basis for this apparent stimulatory effect of Glu tubulin accumulation on tumor progression is unknown. Here we have developed S. cerevisiae strains **expressing** only Glu tubulin and used them as a model to assess the consequences of Glu tubulin accumulation in cells. We find that Glu tubulin strains show defects in nuclear oscillations. These defects are linked to a markedly decreased association of the yeast ortholog of CLIP170, Bik1p, with microtubule plus-ends. These results indicate that the accumulation of Glu tubulin in cells affects microtubule tip complexes that are important for microtubule interactions with the cell cortex.

L10 ANSWER 21 OF 41 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2004470309 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15382060

TITLE: Low **expression** of human tubulin **tyrosine ligase** and suppressed tubulin tyrosination/detyrosination cycle are associated with impaired neuronal differentiation in neuroblastomas with poor prognosis.

AUTHOR: Kato Chiaki; Miyazaki Kou; Nakagawa Atsuko; Ohira Miki; Nakamura Yohko; Ozaki Toshinori; Imai Toshio; Nakagawara Akira

CORPORATE SOURCE: Division of Biochemistry, Chiba Cancer Center Research Institute, Chiba, Japan.

SOURCE: International journal of cancer. Journal international du cancer, (2004 Nov 10) 112 (3) 365-75.
Journal code: 0042124. ISSN: 0020-7136.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200412

ENTRY DATE: Entered STN: 20040922
Last Updated on STN: 20041219
Entered Medline: 20041202

AB Neuroblastoma (NBL), one of the most common childhood solid tumors, has a distinct nature in different prognostic subgroups. However, the precise mechanism underlying this phenomenon remains largely unknown. To understand the molecular and genetic bases of neuroblastoma, we have generated its cDNA libraries and identified a human ortholog of tubulin **tyrosine ligase** gene (hTTL/Nbla0660) as a differentially **expressed** gene at high levels in a favorable subset of the tumor. Tubulin is subjected to several types of evolutionarily conserved posttranslational modification, including tyrosination and detyrosination. Tubulin **tyrosine ligase** catalyzes ligation of the tyrosine residue to the COOH terminus of the detyrosinated form of alpha-tubulin. The measurement of hTTL mRNA **expression** in 74 primary neuroblastomas by quantitative real-time reverse transcription-PCR revealed that its high **expression** was significantly associated with favorable stages (1, 2 and 4s; $p = 0.0069$), high TrkA **expression** ($p = 0.002$), a single copy of MYCN ($p < 0.00005$), tumors found by mass screening ($p = 0.0042$), nonadrenal origin ($p = 0.0042$) and good prognosis ($p = 0.023$). The log-rank test showed that high **expression** of hTTL was an indicator of favorable prognosis ($p = 0.026$). Immunohistochemical analysis using specific antibodies generated by us demonstrated that tyrosinated tubulin (Tyr-tubulin), detyrosinated tubulin (Glu-tubulin) and hTTL as well as Delta2-tubulin were positive in favorable tumors, whereas only Delta2-tubulin was positive in the tumors with MYCN amplification. In an RTBM1 neuroblastoma cell line, hTTL was increased after treating the cells with bone morphogenetic protein 2 (BMP2) or all-trans retinoic acid (RA), which induced neuronal differentiation. These results suggest that the deregulated tubulin tyrosination/detyrosination cycle caused by decreased **expression** of hTTL is associated with inhibition of neuronal differentiation and enhancement of cell growth in the primary neuroblastomas with poor outcome.

L10 ANSWER 22 OF 41 EMBASE

ACCESSION NUMBER: 2004018647 EMBASE

TITLE: Endophyte-Infected Tall Fescue Diet Alters Gene **Expression** in Heifer Luteal Tissue as Revealed by Interspecies Microarray Analysis.

AUTHOR: Jones K.L.; King S.S.; Iqbal M.J.

CORPORATE SOURCE: K.L. Jones, Dept. of Anim. Sci., Food and Nutr., S. Illinois University Carbondale, MC 4417, 1205 Lincoln Drive, Carbondale, IL 62901, United States. kljones@siu.edu

SOURCE: Molecular Reproduction and Development, (2004) Vol. 67, No. 2, pp. 154-161.
Refs: 66
ISSN: 1040-452X CODEN: MREDEE

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
021 Developmental Biology and Teratology
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040129
Last Updated on STN: 20040129

AB Cattle consuming endophyte-infected tall fescue grass have an associated reduction in circulating progesterone and reduced reproductive rates. In this study, commercially available rat microarrays were used to analyze the gene **expression** in luteal tissues from heifers fed endophyte-free fescue, endophyte-infected fescue, or endophyte-infected fescue supplemented with the dopamine (DA) antagonist, domperidone. The number of hybridized spots represented approximately 40% of the total 10,000 rat genes/ESTs evaluated. Each luteal sample was analyzed in triplicate, resulting in within treatment correlation coefficients of ≥0.98. Median values of mRNA abundance from luteal tissue taken from the endophyte-infected fed heifers revealed 598 genes and ESTs that were down regulated and 56 genes and ESTs that were upregulated compared with luteal mRNA values from the endophyte-free treatment. There were fewer comparative differences between median values from luteal mRNA from the endophyte-free versus feeding endophyte-infected plus domperidone treated heifers. Only 19 genes and ESTs were upregulated and two were down-regulated. .COPYRGT. 2004 Wiley-Liss, Inc.

L10 ANSWER 23 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:737915 HCAPLUS
DOCUMENT NUMBER: 139:256359
TITLE: Human cDNA sequences and their encoded proteins and diagnostic and therapeutic uses
INVENTOR(S): Zerhusen, Bryan D.; Patturajan, Meera; Kekuda, Ramesh; Miller, Charles E.; Rieger, Daniel K.; Pena, Carol E. A.; Shimkets, Richard A.; Li, Li; Berghs, Constance; Zhong, Mei; Casman, Stacie J.; Voss, Edward Z.; Boldog, Ferenc L.; Padigaru, Muralidhara; Smithson, Glennda; Shenoy, Suresh G.; Ji, Weizhen; Gorman, Linda; Vernet, Corine A. M.; Leite, Mario W.; Guo, Xiaojia; Anderson, David W.; Spytek, Kimberly A.; Gerlach, Valerie L.; Burgess, Catherine E.; Khramtsov, Nikolai V.; Ort, Tatiana; Ellerman, Karen; Rastelli, Luca; Agee, Michele L.; Chaudhuri, Amitabha; Chant, John S.; Dipippo, Vincent A.; Edinger, Shlomit; Eisen, Andrew; Gangolli, Esha A.; Giot, Loic; Ooi, Chean Eng; Rothenberg, Mark E.; Spaderna, Steven K.; Hjalt, Tord; Liu, Xiaohong; Taupier, Raymond J., Jr.; Catterton, Elina
PATENT ASSIGNEE(S): Curagen Corporation, USA
SOURCE: PCT Int. Appl., 562 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 159
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003076642	A2	20030918	WO 2002-US24459	20020802
WO 2003076642	A3	20041014		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004014053	A1	20040122	US 2002-210130	20020801

CA 2449341	AA	20030918	CA 2002-2449341	20020802
EP 1492807	A2	20050105	EP 2002-806720	20020802
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
JP 2005526507	T2	20050908	JP 2003-574839	20020802
PRIORITY APPLN. INFO.:			US 2001-309501P	P 20010802
			US 2001-310291P	P 20010803
			US 2001-310951P	P 20010808
			US 2001-311292P	P 20010809
			US 2001-311979P	P 20010813
			US 2001-312203P	P 20010814
			US 2001-313156P	P 20010817
			US 2001-313201P	P 20010817
			US 2001-313702P	P 20010820
			US 2001-314031P	P 20010821
			US 2001-314466P	P 20010823
			US 2001-315403P	P 20010828
			US 2001-315853P	P 20010829
			US 2001-316508P	P 20010831
			US 2001-323936P	P 20010921
			US 2001-338078P	P 20011203
			US 2002-354655P	P 20020205
			US 2002-361764P	P 20020305
			US 2002-373825P	P 20020419
			US 2002-380971P	P 20020515
			US 2002-380980P	P 20020515
			US 2002-381039P	P 20020516
			US 2002-383761P	P 20020528
			US 2002-383887P	P 20020529
			US 2002-210130	A2 20020801
			US 2001-313643P	P 20010820
			US 2001-322716P	P 20010917
			WO 2002-US24459	W 20020802

AB Disclosed herein are 49 cDNA sequences that encode novel human polypeptides that are members of various protein families. Also disclosed are polypeptides encoded by these nucleic acid sequences, and antibodies, which immunospecifically-bind to the polypeptide, as well as derivs., variants, mutants, or fragments of the aforementioned polypeptide, polynucleotide, or antibody. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel human nucleic acids and proteins.

L10 ANSWER 24 OF 41 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 2003493733 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14571137
TITLE: Cloning and genomic organization of the TTL gene on mouse chromosome 2 and human chromosome 2q13.
AUTHOR: Erck C; MacLeod R A F; Wehland J
CORPORATE SOURCE: Department of Cell Biology, German Research Center of Biotechnology, Braunschweig, Germany.. cer@gbf.de
SOURCE: Cytogenetic and genome research, (2003) 101 (1) 47-53. Journal code: 101142708. ISSN: 1424-859X.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 20031023
Last Updated on STN: 20040316
Entered Medline: 20040315

AB Tubulin tyrosine ligase (TTL) is a cytosolic enzyme involved in the posttranslational modification of tubulin. In the assembled form microtubules are detyrosinated over time at the C-terminus of alpha-tubulin. After microtubular disassembly TTL restores tyrosine residues back to the detyrosinated tubulin leading to a cycle of detyrosination/tyrosination. Here we report the isolation of the human and mouse TTL cDNA. In comparison with other known TTL sequences, namely bovine, rat and porcine, we found that only porcine TTL deviates in length

by having an insertion of two glutamate residues. In mouse and human TTL the genomic coding sequence is composed of seven exons with normal intron/exon boundaries. Using fluorescence in situ hybridization (FISH), we mapped the murine TTL gene to mouse chromosome 2 (MMU2). Human TTL has been located to chromosome 2q13 (HSA2q13). In addition, we found frequently truncated PCR products of hTTL transcripts with aberrant splicing in tumors.

L10 ANSWER 25 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:56685 SCISEARCH
THE GENUINE ARTICLE: 630QF
TITLE: Identification of CfNek, a novel member of the NIMA family of cell cycle regulators, as a polypeptide copurifying with tubulin polyglutamylation activity in Crithidia
AUTHOR: Westermann S; Weber K (Reprint)
CORPORATE SOURCE: Max Planck Inst Biophys Chem, Dept Biochem, Fassberg 11, D-37077 Gottingen, Germany (Reprint); Max Planck Inst Biophys Chem, Dept Biochem, D-37077 Gottingen, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: JOURNAL OF CELL SCIENCE, (15 DEC 2002) Vol. 115, No. 24, pp. 5003-5012.
ISSN: 0021-9533.
PUBLISHER: COMPANY OF BIOLOGISTS LTD, BIDDER BUILDING CAMBRIDGE COMMERCIAL PARK COWLEY RD, CAMBRIDGE CB4 4DL, CAMBS, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 48
ENTRY DATE: Entered STN: 24 Jan 2003
Last Updated on STN: 24 Jan 2003
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Post-translational glutamylation of tubulin plays an important role in regulating the interaction between microtubules and associated proteins, but so far the enzymes involved in this process have not been **cloned** from any cellular source. Using a modified purification scheme that employs a hydroxyapaptite chromatography as the final step we identified a 54 kDa band as the major polypeptide copurifying with tubulin polyglutamylation activity from the trypanosomatid Crithidia fasciculata. Based on peptide sequence information we have **cloned** the corresponding cDNA and identify Crithidia p54 as a novel member (termed CfNek) of the NIMA family of putative cell cycle regulators. CfNek is a protein of 479 amino acids that contains an unusual protein kinase domain that lacks the glycine-rich loop in subdomain I. The protein also harbours a PEST sequence and a pleckstrin homology domain. The tubulin polyglutamylase preparation displays the P-casein phosphorylation activity typical for NIMA related kinases. **Recombinant** His-tagged CfNek **expressed** in Crithidia localises to the flagellar attachment zone/basal body of the parasite. After purification on a Ni2+-column the **recombinant** enzyme preparation displays ATP-dependent tubulin polyglutamylation activity as well as casein-phosphorylation activity.

L10 ANSWER 26 OF 41 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2003006942 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12512949
TITLE: **Cloning** of rat olfactory bulb tubulin **tyrosine ligase** cDNA: a dominant negative mutant and an antisense cDNA increase the proliferation rate of cells in culture.
AUTHOR: Mas Carlos R; Arregui Carlos O; Filiberti Adrian; Argarana Carlos E; Barra Hector S
CORPORATE SOURCE: Centro de Investigaciones en Quimica Biologica de Cordoba, CIQUIBIC (UNC-CONICET), Facultad de Ciencias Quimicas, Universidad Nacional de Cordoba, Cordoba, Argentina.
SOURCE: Neurochemical research, (2002 Nov) 27 (11) 1453-8.
Journal code: 7613461. ISSN: 0364-3190.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 20030107
Last Updated on STN: 20030308
Entered Medline: 20030307

AB In this paper we describe the **cloning** of rat olfactory bulb tubulin **tyrosine ligase** (TTL) cDNA, and investigate the physiological role of TTL in cultured CHO-K1 cells. Comparison of the deduced amino acid sequence of rat TTL cDNA with those of bovine and pig showed approximately 90% of identity. Transient transfection of CHO-K1 cells with a dominant negative mutant of TTL that contains the binding site to the substrate (tubulin) but not the catalytic domain, significantly decreased the endogenous TTL activity as determined in vitro. Similar results were obtained using a construction encoding for the antisense sequence of TTL. The reduction in TTL activity is not accompanied by a decrease in the tyrosination levels of microtubules, as judged by immunofluorescence analysis. Strikingly, the number of cells in the plates transfected with the mutant TTL or the antisense TTL cDNA was, after 72 h of culture, two and three times higher, respectively, than the number of cells in the control plates. These results support the hypothesis that TTL may play a role in the regulation of the cell cycle in living cells.

L10 ANSWER 27 OF 41 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2001013397 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11004583
TITLE: Incorporation of nitrotyrosine into alpha-tubulin by **recombinant** mammalian tubulin-**tyrosine ligase**.
AUTHOR: Kalisz H M; Erck C; Plessmann U; Wehland J
CORPORATE SOURCE: Gesellschaft fur Biotechnologische Forschung, Abteilung Zellbiologie, Braunschweig, Germany.
SOURCE: Biochimica et biophysica acta, (2000 Aug 31) 1481 (1) 131-8.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001102

AB Tubulin-**tyrosine ligase** (TTL, EC 6.3.2.25) from porcine brain, which catalyses the readdition of tyrosine to the C-terminus of detyrosinated alpha-tubulin, was **cloned** and **expressed** in Escherichia coli as a glutathione S-transferase-fusion protein. Upon cleavage of the immobilised fusion protein, an electrophoretically homogeneous enzyme was obtained. **Recombinant** TTL, which exhibited similar catalytic properties as the mammalian enzyme purified from brain tissue, was capable of using nitrotyrosine as an alternative substrate in vitro. Incorporation of tyrosine into tubulin was competitively inhibited by nitrotyrosine with an apparent K(i) of 0.24 mM. The TTL-catalysed incorporation of nitrotyrosine as sole substrate into alpha-tubulin was clearly detectable at concentrations of 10 microM by immunological methods using nitrotyrosine specific antibodies. However, in competition with tyrosine 20-fold higher concentrations of nitrotyrosine were necessary before its incorporation became evident. Analysis of the C-terminal peptides of in vitro modified alpha-tubulin by MALDI-MS confirmed the covalent incorporation of nitrotyrosine into tubulin by TTL. In contrast to the C-terminal tyrosine, pancreatic carboxypeptidase A was incapable of cleaving nitrotyrosine from the modified alpha-tubulin.

L10 ANSWER 28 OF 41 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 2001070000 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11054573
TITLE: Characterization of the human tubulin **tyrosine**

ligase-like 1 gene (TTLL1) mapping to 22q13.1.
AUTHOR: Trichet V; Ruault M; Roizes G; De Sario A
CORPORATE SOURCE: Sequences Repetees et Centromeres Humains, CNRS UPR 1142, Institut de Biologie, 4, bv Henri IV, 34060, Montpellier, France.
SOURCE: Gene, (2000 Oct 17) 257 (1) 109-17.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF104927; GENBANK-AF173935
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010104

AB This paper reports the characterization of the human tubulin **tyrosine ligase**-like 1 gene (TTLL1), which maps to the chromosome region 22q13.1 and has been partially duplicated on three other acrocentric chromosomes: 13, 15 and 21. We describe the complete cDNA, TTLL1a, coding for the putative 423 amino acid long TTLL1 and alternative transcripts coding for truncated TTLL1. Likely TTLL1a corresponds to the 1.8 kb transcript that was detected in a wide range of tissues and has a stronger **expression** in heart, brain and testis. A 4.8 kb transcript was found only in brain tissues. We present an interspecies sequence comparison, revealing three conserved domains, named TTLD1, TTLD2 and TTLD3, that are specific to the TTLs and TTL-like proteins.

L10 ANSWER 29 OF 41 MEDLINE on STN
ACCESSION NUMBER: 2000148025 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10685598
TITLE: Tubulin-**tyrosine ligase**, a long-lasting enigma.
AUTHOR: Erck C; Frank R; Wehland J
CORPORATE SOURCE: Abteilung Zellbiologie, Gesellschaft fuer Biotechnologische Forschung, Braunschweig, Germany.
SOURCE: Neurochemical research, (2000 Jan) 25 (1) 5-10. Ref: 48
Journal code: 7613461. ISSN: 0364-3190.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000320
Last Updated on STN: 20000320
Entered Medline: 20000309

AB Tubulins and microtubules are subjected to several post-translational modifications of which the reversible detyrosination/tyrosination of the carboxy-terminal end of most alpha-tubulins has been extensively analysed. This modification cycle involves a specific carboxypeptidase and the activity of the tubulin-**tyrosine ligase** (TTL). The true physiological function of TTL has so far not been established. This review describes the purification of TTL to homogeneity by biochemical methods, its in vitro properties and the generation of monoclonal antibodies. These mabs not only enabled a very convenient and rapid purification of TTL by immunoaffinity chromatography but also its extensive characterization by protein sequencing, which led to the isolation of the full length cDNA. With this information, gene disruption should be feasible in order to determine the physiological significance of the tyrosination cycle.

L10 ANSWER 30 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:434745 SCISEARCH
THE GENUINE ARTICLE: 321LD
TITLE: Phosphorylation of tubulin **tyrosine ligase**: A potential mechanism for regulation of

alpha-tubulin tyrosination
AUTHOR: Idriss H T (Reprint)
CORPORATE SOURCE: Univ St Andrews, Sch Biomed Sci, N Haugh, St Andrews KY16 9ST, Fife, Scotland (Reprint); Univ St Andrews, Ctr Biomed Sci, St Andrews KY16 9ST, Fife, Scotland; Univ Texas, Med Branch, Sealy Ctr Mol Sci, Galveston, TX 77550 USA
COUNTRY OF AUTHOR: Scotland; USA
SOURCE: CELL MOTILITY AND THE CYTOSKELETON, (MAY 2000) Vol. 46, No. 1, pp. 1-5.
ISSN: 0886-1544.
PUBLISHER: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012 USA.
DOCUMENT TYPE: General Review; Journal
LANGUAGE: English
REFERENCE COUNT: 28
ENTRY DATE: Entered STN: 2000
Last Updated on STN: 2000
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The tubulin tyrosination/detyrosination cycle is a well-established posttranslational modification, which is carried out by two enzymes: Tubulin **Tyrosine Ligase** (TTL) and Tubulin Tyrosine Carboxypeptidase (TTCP). In this paper, I present evidence suggesting that the cycle itself is under the hierarchical control of reversible phosphorylation and that PKC mediated phosphorylation of TTL inhibits its activity, thereby preventing tubulin tyrosination. Phosphorylation of TTL is predicted to occur in a postulated Mg++/-ATP binding fold, leading to inhibition of Mg++/ATP binding and TTL mediated catalysis. The implications of such control are also discussed. (C) 2000 Wiley-Liss, Inc.

L10 ANSWER 31 OF 41 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 1998070560 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9405300
TITLE: Suppression of tubulin **tyrosine ligase** during tumor growth.
AUTHOR: Lafanechere L; Courtay-Cahen C; Kawakami T; Jacrot M; Rudiger M; Wehland J; Job D; Margolis R L
CORPORATE SOURCE: Laboratoire du Cytosquelette, INSERM U366, DBMS, Commisariat a l'Energie Atomique/Grenoble, Grenoble, France.
SOURCE: Journal of cell science, (1998 Jan) 111 (Pt 2) 171-81.
Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199803
ENTRY DATE: Entered STN: 19980326
Last Updated on STN: 19980326
Entered Medline: 19980317

AB The C terminus of the tubulin alpha-subunit of most eukaryotic cells undergoes a cycle of tyrosination and detyrosination using two specific enzymes, a tubulin **tyrosine ligase** (TTL) and a tubulin carboxypeptidase. Although this enzyme cycle is conserved in evolution and exhibits rapid turnover, the meaning of this modification has remained elusive. We have isolated several NIH-3T3 derived **clonal** cell lines that lack TTL (TTL-). TTL- cells contain a unique tubulin isotype (delta2-tubulin) that can be detected with specific antibodies. When injected into nude mice, both TTL- cells and TTL- cells stably transfected with TTL cDNA form sarcomas. But in tumors formed from TTL rescued cells, TTL is systematically lost during tumor growth. A strong selection process has thus acted during tumor growth to suppress TTL activity. In accord with this result, we find suppression of TTL activity in the majority of human tumors assayed with delta2-tubulin antibody. We conclude there is a widespread loss of TTL activity during tumor growth in situ, suggesting that TTL activity may play a role in tumor cell regulation.

L10 ANSWER 32 OF 41 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 97234553 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9118990
TITLE: Tubulin post-translational modifications--enzymes and their mechanisms of action.
AUTHOR: MacRae T H
CORPORATE SOURCE: Department of Biology, Dalhousie University, Halifax, Canada.
SOURCE: European journal of biochemistry / FEBS, (1997 Mar 1) 244 (2) 265-78. Ref: 172
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 19970506
Last Updated on STN: 20000303
Entered Medline: 19970422

AB This review describes the enzymes responsible for the post-translational modifications of tubulin, including detyrosination/tyrosination, acetylation/deacetylation, phosphorylation, polyglutamylation, polyglycylation and the generation of non-tyrosinatable alpha-tubulin. Tubulin **tyrosine-ligase**, which reattaches tyrosine to detyrosinated tubulin, has been extensively characterized and its gene sequenced. Enzymes such as tubulin-specific carboxypeptidase and alpha-tubulin acetyltransferase, required, respectively, for detyrosination and acetylation of tubulin, have yet to be purified to homogeneity and examined in defined systems. This has produced some conflicting results, especially for the carboxypeptidase. The phosphorylation of tubulin by several different types of kinases has been studied in detail but drawing conclusions is difficult because many of these enzymes modify proteins other than their actual substrates, an especially pertinent consideration for in vitro experiments. Tubulin phosphorylation in cultured neuronal cells has proven to be the best model for evaluation of kinase effects on tubulin/microtubule function. There is little information on the enzymes required for polyglutamylation, polyglycylation, and production of non-tyrosinatable tubulin, but the available data permit interesting speculation of a mechanistic nature. Clearly, to achieve a full appreciation of tubulin post-translational changes the responsible enzymes must be characterized. Knowing when the enzymes are active in cells, if soluble or polymerized tubulin is the preferred substrate and the amino acid residues modified by each enzyme are all important. Moreover, acquisition of purified enzymes will lead to **cloning** and sequencing of their genes. With this information, one can manipulate cell genomes in order to either modify key enzymes or change their relative amounts, and perhaps reveal the physiological significance of tubulin post-translational modifications.

L10 ANSWER 33 OF 41 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 97261916 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9108330
TITLE: Tubulin **tyrosine ligase**: protein and mRNA **expression** in developing rat skeletal muscle.
AUTHOR: Arregui C O; Mas C R; Argarana C E; Barra H S
CORPORATE SOURCE: Centro de Investigaciones en Quimica Biologica de Cordoba (CIQUIBIC), UNC-CONICET, Dpto. de Quimica Biologica, Facultad de Ciencias Quimicas, Universidad Nacional de Cordoba, Argentina.
SOURCE: Development, growth & differentiation, (1997 Apr) 39 (2) 167-78.
Journal code: 0356504. ISSN: 0012-1592.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U53214
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970805

Last Updated on STN: 20020212
Entered Medline: 19970724

AB Alpha tubulin can be post-translationally tyrosinated at the carboxy-terminus by a specific enzyme: tubulin **tyrosine ligase**. The **expression** of tubulin **tyrosine ligase** mRNA and protein during the development of rat skeletal muscle was examined in the present study. A portion of the coding region of the rat ligase cDNA was isolated and sequenced. The nucleotide and amino acid sequences showed about 90% homology with previously reported porcine and bovine ligase sequences. In newborn rats, ligase mRNA and protein were highly **expressed** in skeletal muscle. During early postnatal development, however, both ligase mRNA and protein dropped down dramatically. Quantitative measurements revealed that ligase protein at postnatal day 20 represented only 10% or less of the level at postnatal day 1. Ligase mRNA **expression** was also examined during the myogenesis in vitro. A strong ligase mRNA signal was detected in both undifferentiated myoblasts and cross-striated, contractile myotubes. The present results suggest that, during muscle differentiation, ligase function may be regulated by the amount of available mRNA. The discrepancy in the ligase **expression** between the in vivo and in vitro myogenesis suggests that factors controlling the levels of mRNA in vivo are lost in vitro.

L10 ANSWER 34 OF 41 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 93147125 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8093886
TITLE: Characterization of the tubulin-**tyrosine ligase**.
AUTHOR: Ersfeld K; Wehland J; Plessmann U; Dodemont H; Gerke V; Weber K
CORPORATE SOURCE: Max-Planck-Institute for Biophysical Chemistry, Department of Biochemistry, Goettingen, Germany.
SOURCE: Journal of cell biology, (1993 Feb) 120 (3) 725-32.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X68453
ENTRY MONTH: 199303
ENTRY DATE: Entered STN: 19930312
Last Updated on STN: 19980206
Entered Medline: 19930302

AB The sequence of tubulin-**tyrosine ligase** (TTL), the enzyme catalyzing the ATP-dependent posttranslational addition of a tyrosine to the carboxyterminal end of detyrosinated alpha-tubulin, has been determined. TTL from bovine and porcine brain was purified by immunoaffinity chromatography and extensively characterized by protein sequencing. Oligonucleotides derived from the protein sequence were synthesized and partial cDNA sequences were obtained using reversed transcribed brain mRNA in polymerase chain reactions. Polymerase chain reaction fragments were used to isolate a full-length cDNA **clone** from a randomly primed lambda gt10 cDNA library obtained from embryonic porcine brain mRNA. Porcine TTL is encoded by 1,137 nucleotides corresponding to 379 amino acid residues. It has a molecular weight of 43,425 and a calculated isoelectric point of 6.51. Northern blot analysis revealed a surprisingly long mRNA (approximately 6 kb in embryonic porcine brain). The protein sequence of TTL shares no extended homology with the sequences in the data banks. TTL contains a potential serine phosphorylation site for cAMP-dependent protein kinase (RKAS at positions 73 to 76). Residues 244 to 258 lie at the surface of the molecule. A rabbit antibody raised against a synthetic peptide corresponding to this sequence binds to native TTL. The same sequence contains the cleavage site for endoproteinase Glu-C (residue 248) previously shown to convert TTL into a nicked derivative in which the two fragments still form a tight complex but don't display enzymatic activity.

L10 ANSWER 35 OF 41 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1992:70844 SCISEARCH
THE GENUINE ARTICLE: HA993
TITLE: POLYGLUTAMYLATED ALPHA-TUBULIN CAN ENTER THE TYROSINATION DETYROSINATION CYCLE
AUTHOR: EDDE B (Reprint); ROSSIER J; LECAER J P; PROME J C; DESBRUYERES E; GROS F; DENOULET P
CORPORATE SOURCE: COLL FRANCE, BIOCHIM CELLULAIRE LAB, 11 PL MARCELIN BERTHELOT, F-75231 PARIS 05, FRANCE (Reprint); CNRS, CTR RECH BIOCHIM & GENET CELLULAIRE, F-31062 TOULOUSE, FRANCE; CNRS, PHYSIOL NERVEUSE LAB, F-91198 GIF SUR YVETTE, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: BIOCHEMISTRY, (21 JAN 1992) Vol. 31, No. 2, pp. 403-410. ISSN: 0006-2960.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 43
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We have previously identified a major modification of neuronal alpha-tubulin which consists of the posttranslational addition of a varying number of glutamyl units on the gamma-carboxyl group of glutamate residue 445. This modification, called polyglutamylation, was initially found associated with detyrosinated alpha-tubulin [Edde, B., Rossier, J., Le Caer, J. P., Desbruyeres, E., Gros, F., & Denoulet, P. (1990) Science 247, 83-85]. In this report we show that a lateral chain of glutamyl units can also be present on tyrosinated alpha-tubulin. Incubation of cultured mouse brain neurons with radioactive tyrosine, in the presence of cycloheximide, resulted in a posttranslational labeling of six alpha-tubulin isoelectric variants. Because both tyrosination and polyglutamylation occur in the C-terminal region of alpha-tubulin, the structure of this region was investigated. [H-3]tyrosinated tubulin was mixed with a large excess of unlabeled mouse brain tubulin and digested with thermolysin. Five peptides, detected by their radioactivity, were purified by high-performance liquid chromatography. Amino acid sequencing and mass spectrometry showed that one of these peptides corresponds to the native C-terminal part of alpha-tubulin (VEGEGEEEGEEY)-V-440-Y-451 and that the remainders bear a varying number of glutamyl units linked to glutamate residue 445, which explains the observed heterogeneity of tyrosinated alpha-tubulin. A quantitative analysis showed that the different tyrosinated forms of alpha-tubulin represent a minor (13%) fraction of the total alpha-tubulin present in the brain and that most (80%) of these tyrosinated forms are polyglutamylated. The different forms of alpha-tubulin were found to be equal substrates for tubulin **tyrosine ligase** and tubulin carboxypeptidase, which indicates that alpha-tubulin can enter the tyrosination/detyrosination cycle independently of its degree of glutamylation.

L10 ANSWER 36 OF 41 MEDLINE on STN
ACCESSION NUMBER: 89150728 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3067795
TITLE: Tubulin **expression** in trypanosomes.
AUTHOR: Gallo J M; Precigout E
CORPORATE SOURCE: Laboratoire de Biologie Cellulaire, URA CNRS 80, UFR Sciences, Poitiers, France.
SOURCE: Biology of the cell / under the auspices of the European Cell Biology Organization, (1988) 64 (2) 137-43. Ref: 46
Journal code: 8108529. ISSN: 0248-4900.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198904
ENTRY DATE: Entered STN: 19900306
Last Updated on STN: 19900306

Entered Medline: 19890418

AB Microtubules in trypanosomes are the main component of the flagellar axoneme and of the subpellicular microtubule corset, whose relative positions determine the morphology of each cell stage of the life cycle of these parasites. Microtubules are polymers of tubulin, a protein dimer of two 55-kDa subunits, alpha- and beta-tubulin; in Trypanosoma brucei, the tubulin-coding sequences are clustered in a 40-kb fragment of tandemly repeated alpha- and beta-tubulin genes separated by a 170-bp intergenic zone. This cluster is transcribed in a unique RNA which is rapidly processed into mature mRNAs carrying the 5' 35-nucleotide leader sequence found in all trypanosome mRNAs. Although no heterogeneity has been found at the gene level, tubulin can be post-translationally modified in 2 ways: the C-terminal tyrosine of alpha-tubulin can be selectively cleaved and added again with 2 enzymes, tubulin carboxypeptidase and tubulin-**tyrosine ligase**; alpha-tubulin can also be acetylated on a lysine residue. Some molecular domains of tubulin are restricted to subpopulations of microtubules; for instance, the beta-tubulin form defined by the monoclonal antibody 1B41 is sequestered into a part of the subpellicular cytoskeleton limited to the flagellar adhesion zone, which might correspond to the group of 4 microtubules associated with a cisterna of the endoplasmic reticulum, forming the so-called "subpellicular microtubule quartet" (SFMQ). The early assembly of this zone in each daughter cell during the cell division of T. brucei, together with the alterations undergone by the domain defined by the monoclonal antitubulin 24E3 during the differentiation of Trypanosoma cruzi, suggest that specific tubulin forms are responsible for dynamic properties of SFMQ possibly involved in trypanosome morphogenesis.

L10 ANSWER 37 OF 41 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1987-09146 BIOTECHDS
TITLE: Tubulin-**tyrosine-ligase** has a binding site on beta-tubulin: a 2-domain structure of the enzyme; hybridoma construction for monoclonal antibody production
AUTHOR: Wehland J; Weber K
CORPORATE SOURCE: Max-Planck-Inst.Biophys.Chem.
LOCATION: Max Planck Institute for Biophysical Chemistry, D-3400 Goettingen, Germany
SOURCE: J.Cell Biol.; (1987) 104, 4, 1059-67
CODEN: JCLBA3
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Using 2 distinct tubulin-**tyrosine-ligase** monoclonal antibodies, several subunit-specific tubulin monoclonal antibodies, and chemical crosslinking, a ligase binding site was identified on beta-tubulin. For production of the enzyme specific antibodies, 6-wk-old female BALB/c mice were immunized 3 times at 3 wk intervals with 100-200 ug affinity purified ligase emulsified in Freund's complete adjuvant for the first injection and Freund's incomplete adjuvant for the subsequent injections. The mice were tested for monoclonal antibody production, and spleen cells from the mouse with highest serum titer were fused with PAI myeloma cells. Positive producing hybridomas were **cloned** twice by limiting dilution and monoclonal antibodies produced in ascites fluid in BALB/c mice. The binding site characterized is retained when the carboxy-terminal domains of both tubulin subunits are removed by subtilisin treatment. This explains the extreme substrate specificity of the enzyme, which does not act on other cellular proteins or carboxy-terminal peptides derived from detyrosinated alpha-tubulin. (42 ref)

L10 ANSWER 38 OF 41 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1985-04125 BIOTECHDS
TITLE: Purification of brain tubulin-**tyrosine-ligase** by biochemical and immunological methods; monoclonal antibody preparation and hybridoma construction
AUTHOR: Schroeder H C; Wehland J; Weber K
CORPORATE SOURCE: Max-Planck-Inst.Biophys.Chem.
LOCATION: Institute for Physiological Chemistry, University of Mainz, D-6500 Mainz, Germany.
SOURCE: J.Cell Biol.; (1985) 100, 1, 276-81

CODEN: JCLBA3
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Tubulin-tyrosin-ligase (TTL) was purified biochemically from pig brain tissue to near homogeneity (over 95%). The purified enzyme, (10-20 ug) was then injected 3 times into Balb/c mice at intervals of 3 weeks. Freund's complete adjuvant and incomplete adjuvant were used for the first and last 2 injections respectively. Immune spleen cells were fused with PAI myeloma cells, and hybridomas were selected in HAT. Those secreting monoclonal antibody to TTL were **cloned** twice in soft agar. The antibodies specifically recognized TTL in brain and liver tissue of various mammals. Purified ascites IgG were coupled to CNBr-activated Sepharose 4B. TTL from crude brain extract selectively bound to this immunoaffinity column in 1.5 M NaCl and eluted with 3 M NaCl. The purity of the eluted TTL was over 95%. It was a monomeric protein of apparent mol.weight 40,000. It associated as a 1/1 complex with alpha-beta-tubulin on gradient centrifugation. (32 ref)

L10 ANSWER 39 OF 41 MEDLINE on STN
ACCESSION NUMBER: 84180758 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6201294
TITLE: Organization of microtubules in stabilized meristematic plant cells revealed by a rat monoclonal antibody reacting only with the tyrosinated form of alpha-tubulin.
AUTHOR: Wehland J; Schroeder M; Weber K
SOURCE: Cell biology international reports, (1984 Feb) 8 (2) 147-50.
Journal code: 7708050. ISSN: 0309-1651.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198406
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19840619
AB A rat monoclonal antibody against yeast tubulin (**clone** YL 1/2; Kilmartin et al., 1982) that reacts specifically with mammalian alpha-tubulin carrying a carboxyterminal tyrosine residue (Wehland et al., 1983) was used to localize microtubules in plant cells derived from onion root apices (Allium cepa L.). YL 1/2 reacted with all types of microtubular arrays known to occur in higher plant meristematic cells such as interphase cortical microtubules, pre-prophase bands, the mitotic spindle and phragmoplast microtubules. The specific labeling of microtubules in isolated cells from onion root tips by YL 1/2 indicates that plant cells like animal cells contain tubulin **tyrosine ligase**, the enzyme which posttranslationally modifies alpha-tubulin. This enzyme could be involved in the dynamic regulation of microtubular arrays in all eukaryotic cells.

L10 ANSWER 40 OF 41 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:81418 HCAPLUS
DOCUMENT NUMBER: 100:81418
TITLE: State of tyrosination of soluble synaptosomal tubulin
AUTHOR(S): Barra, Hector S.; Arce, Carlos A.
CORPORATE SOURCE: Fac. Cienc. Quim., UNC, Cordoba, 5016, Argent.
SOURCE: Comunicaciones Biologicas (1983), 2(1), 13-18
CODEN: COBIEJ; ISSN: 0326-1956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The presence of tubulin-**tyrosine ligase** and the state of tyrosination of tubulin in the soluble synaptosomal fraction from rat brain was studied. The ligase was present in this soluble fraction and the amts. of tyrosinated and nontyrosinated tubulin (**expressed** as nmol/mg protein) were similar to those in the cytosolic fraction.

L10 ANSWER 41 OF 41 EMBASE COPYRIGHT (c) 2005 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 79099794 EMBASE

DOCUMENT NUMBER: 1979099794
TITLE: Studies on NGF induced differentiation in PC12 pheochromocytoma cells. Specific rise in tyrosyl tubulin ligase activity induced by the nerve growth factor.
AUTHOR: Levi A.; Castellani L.; Calissano P.; et al.
CORPORATE SOURCE: Lab. Biol. Cell., CNR, Roma, Italy
SOURCE: Bulletin of Molecular Biology and Medicine, (1978) Vol. 3, No. SUPPL. 1, pp. 42s-50s.
CODEN: BMBMD5
COUNTRY: Italy
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
003 Endocrinology
029 Clinical Biochemistry
030 Pharmacology
LANGUAGE: English
AB A model system for the in vitro study of the mechanism of action of nerve growth factor (NGF) is described. The PC12 **clonal** line derived from a rat pheochromocytoma is shown to be very similar to the stem cell progenitor of both adrenal cromaffin cells and sympathetic neurones and to differentiate morphologically and physiologically like a nerve cell in response to NGF. Studies on tyrosyl tubulin ligase activity as a function of NGF induced differentiation in PC12 cells are reported.

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(FILE 'HOME' ENTERED AT 14:32:56 ON 06 OCT 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 14:33:23 ON 06 OCT 2005
L1 6829 S TESTIS(W)SPECIFIC
L2 428 S TYROSINE (W)LIGASE?
L3 3 S L1 AND L2
L4 2 DUP REM L3 (1 DUPLICATE REMOVED)
L5 7299296 S CLON? OR EXPRESS? OR RECOMBINANT
L6 89 S L2 AND L5
L7 20724 S "CPG ISLAND"
L8 12 S L6 AND L7
L9 10 DUP REM L8 (2 DUPLICATES REMOVED)
L10 41 DUP REM L6 (48 DUPLICATES REMOVED)

=> e feder j n/au
E1 101 FEDER J L/AU
E2 74 FEDER J M/AU
E3 183 --> FEDER J N/AU
E4 1 FEDER J N */AU
E5 16 FEDER JACK B/AU
E6 1 FEDER JAN DAVID/AU
E7 1 FEDER JEAN M/AU
E8 3 FEDER JEAN MARC/AU
E9 54 FEDER JEFFREY L/AU
E10 88 FEDER JENS/AU
E11 1 FEDER JOHANN/AU
E12 2 FEDER JOHANN G/AU

=> s e3
L11 183 "FEDER J N"/AU

=> e wu s/au
E1 2 WU RUYU/AU
E2 1 WU RYH LIH/AU
E3 3445 --> WU S/AU
E4 1 WU S */AU
E5 24 WU S A/AU
E6 85 WU S B/AU
E7 1611 WU S C/AU
E8 1 WU S C C/AU
E9 3 WU S C G/AU

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E10          18      WU S C H/AU
E11           6      WU S C S/AU
E12           1      WU S C X P/AU

=> s e3
L12        3445 "WU S"/AU

=> e nelson t c/au
E1            6      NELSON T B/AU
E2            1      NELSON T BLAINE/AU
E3          127 --> NELSON T C/AU
E4           98      NELSON T D/AU
E5          621      NELSON T E/AU
E6           35      NELSON T E JR/AU
E7           50      NELSON T F/AU
E8            1      NELSON T F JR/AU
E9           38      NELSON T G/AU
E10          55      NELSON T H/AU
E11          12      NELSON T HOLLAND/AU
E12           2      NELSON T I/AU

=> s e3
L13         127 "NELSON T C"/AU

=> d his

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     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
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L8            12 S L6 AND L7
L9            10 DUP REM L8 (2 DUPLICATES REMOVED)
L10           41 DUP REM L6 (48 DUPLICATES REMOVED)
                 E FEDER J N/AU
L11          183 S E3
                 E WU S/AU
L12         3445 S E3
                 E NELSON T C/AU
L13          127 S E3

=> s l11 or l12 or l13
L14         3727 L11 OR L12 OR L13

=> s l2 and l14
L15            1 L2 AND L14

=> d all

L15   ANSWER 1 OF 1  BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
AN    2004-07314  BIOTECHDS
TI    New testis-specific tubulin tyrosine-ligase-like
      BGS-42 polypeptide, useful for preventing, treating or ameliorating a
      medical condition, e.g. aberrant cellular proliferation, reproductive
      disorders or testicular disorders;
         involving vector-mediated gene transfer, expression in host cell for
         use in gene therapy
AU    FEDER J N; WU S; NELSON T C
PA    BRISTOL-MYERS SQUIBB CO
PI    WO 2004005487 15 Jan 2004
AI    WO 2003-US21605 9 Jul 2003
PRAI  US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DT    Patent
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LA English
OS WPI: 2004-099381 [10]
AB DERWENT ABSTRACT:
NOVELTY - A testis-specific tubulin **tyrosine-ligase** -like polypeptide, designated BGS-42 polypeptide, is new.

DETAILED DESCRIPTION - A testis-specific tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having tyrosine tubulin ligase activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having tyrosine tubulin ligase activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of (I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a recombinant vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a recombinant host cell comprising the vector sequences, or expressing the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the expression of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard recombinant methods. Making an isolated polypeptide comprises culturing the recombinant host cell under conditions such that the polypeptide is expressed, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a human tyrosine tubulin ligase. Preferred Method: Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of expression of the BGS-42

polypeptide in a tyrosine tubulin ligase sample, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders, testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia, Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. Clones containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene expression. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

CC THERAPEUTICS, Protein Therapeutics; GENETIC TECHNIQUES and APPLICATIONS, Gene Expression Techniques and Analysis; DISEASE, Cancer; DISEASE, Central Nervous System; DISEASE, HIV and Other Virus Infections; DISEASE, Other Diseases; DIAGNOSTICS, Molecular Diagnostics; THERAPEUTICS, Gene Therapy

CT RECOMBINANT TESTIS-SPECIFIC TUBULIN **TYROSINE-LIGASE** -LIKE PROTEIN PREP., ISOL., VECTOR-MEDIATED GENE TRANSFER, EXPRESSION IN HOST CELL, APPL. CANCER, REPRODUCTIVE DISORDER, TESTICULAR DISORDER, PULMONARY DISORDER, GASTROINTESTINAL DISORDER, NEURAL DISORDER, IMMUNOLOGICAL DISORDER, ARTHRITIS, ASTHMA, AIDS, SEPSIS, ACNE DIAGNOSIS, THERAPY, GENE THERAPY PROTEIN TUMOR (23, 14)

=> d his

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L14        3727 S L11 OR L12 OR L13
L15           1 S L2 AND L14
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	Issue Date	Pages	Document ID	Title
1	20050602	71	US 20050118665 A1	Methods for conducting assays for enzyme activity on protein microarrays
2	20040902	199	US 20040171131 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
3	20040812	171	US 20040157234 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
4	20040701	105	US 20040126762 A1	Novel compositions and methods in cancer
5	20040617	174	US 20040116670 A1	Cytoskeleton-associated proteins
6	20040520	106	US 20040096828 A1	Cytoskeleton-associated proteins
7	20040122	250	US 20040014053 A1	Novel proteins and nucleic acids encoding same
8	20040108	165	US 20040005560 A1	Novel full-length cDNA
9	20031225	178	US 20030236392 A1	Novel full length cDNA
10	20031211	206	US 20030228570 A1	Methods of diagnosis of Hepatitis C infection, compositions and methods of screening for modulators of Hepatitis C infection

11	20030529	34	US 20030099925 A1	Yeast arrays, methods of making such arrays, and methods of analyzing such arrays

	Issue Date	Pages	Document ID	Title
12	20030320	196	US 20030054421 A1	Nucleic acids, proteins, and antibodies
13	20030306	24	US 20030044866 A1	Yeast arrays, methods of making such arrays, and methods of analyzing such arrays
14	20050913	138	US 6943241 B2	Full-length cDNA
15	20040831	93	US 6783969 B1	Cathepsin V-like polypeptides

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	L #	Hits	Search Text
1	L1	0	testis adj specific adj tyrosine adj kinase$2
2	L2	2	"BGS42"
3	L3	776168	clon$3 or express$3 or recombinant
4	L4	15	tyrosine adj ligase$2
5	L5	653	"CpG island"
6	L6	0	l4 and l5
7	L7	163115	WU FEDER NELSON
8	L8	7	l4 and l7